Remarks

Claims 1-41 are pending in this Application. By this Amendment, claims 1, 6, 11-14, 16, 22, 31, 33-36, 38 and 39 are amended, and new claim 42 has been added. After entry of this Amendment, claims 1-42 will be pending. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Request for Interview

Applicant formally requests the Examiner to contact the undersigned attorney prior to issuance of the next Office action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

New Claim 42

Claim 42 was added to include features earlier presented in but deleted from independent claim 38.

Amended Claims 1, 11-13, 16, 33-35, 38 and 39

Independent claims 1, 16, 38 and 39 have been amended to correct minor grammatical errors. Claims 1, 16, 38 and 39 have been further amended as will be described in more detail below.

Claim 22 has been amended to correct a minor grammatical error.

Claims 6, 11-14, 31 and 33-36 have been amended to align claim language with respective base claims 1 and 16 and for completeness.

Rejection of Claims 1-41 Under 35 U.S.C. § 112

The Office action rejects claims 1-41 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 1-41 are also rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description requirement. More specifically, the Examiner takes issue with the recitation of "without the need for a stud

injection tube" as recited in independent claims 1, 16, 38 and 39. Applicant respectfully traverses this rejection.

Independent claims 1, 16, 38 and 39 have been amended to omit the feature "without the need for a stud injection tube." Accordingly, withdrawal of the §112 rejection of claims 1-41 is respectfully requested.

Rejection of Claims 1-41

Claims 1-6, 8-22 and 30-41

Claims 1-6, 8-22 and 30-41 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,385,742 ("Pettersson") in view of at least one of U.S. Patent Application Publication No. 2002/0050312 ("Ostrovskis") and Russian Patent No. 2,152,318 ("Russia"). Applicant respectfully traverses this rejection.

Claims 1 and 16 are directed to a combination for installing anti-slip studs that comprises, among other features, at least one anti-slip stud and an installation tool. As amended, the installation tool comprises jaw fingers each comprising "a base portion and a tip portion with the base portions defining a stud receiving area therebetween and the tip portions defining a stud orienting area therebetween." As further amended, the at least one anti-slip stud is "oriented in any of a plurality of orientations when positioned within the stud receiving area" and the tip portions of the jaw fingers are numbered and configured to "orient said at least one anti-slip stud from one of the plurality of orientations into the predetermined stud orientation" as the anti-slip stud is driven into contact with the tip portions.

1. Pettersson

Pettersson does not teach or even suggest a stud installation tool that ensures proper orientation of a stud relative to the tire. Pettersson teaches only one cross-sectional shape of the studs, i.e., circular, and does not mention studs having a cross-sectional shape other than circular. Further, Pettersson does not mention orientation of the studs and does not imply or suggest orientating the studs since circular studs have an infinite number of symmetrical planes and only one possible orientation.

Pettersson also does not teach or even suggest jaw fingers that define a stud receiving area in which the studs can be oriented in any of a plurality of stud orientations and a stud orienting area in which the studs are oriented into a predetermined stud orientation by contact with tip portions of the jaw fingers. Pettersson discloses an apparatus for fastening spikes having "a bore 20 into which the spikes are moved one by one through a feeder channel 21" and then "into a position between the finger end portions 17a, 18a, 19a." Column 2, lines 55-60. The bore 20 has the same shape as the spikes, i.e., circular. As shown in Figure 7, the bore 20 extends up to the finger end portions 17a, 18a, 19a such that as the stud exits the bore 20, the head 13 of the studs immediately contacts the finger end portions while the flange 15 is still within and in contact with the bore 20. Assuming, without concession, that one would be motivated to use non-circular spikes, which one would not be, the bore 20 would maintain the spikes in a single orientation as the spikes are positioned between the finger end portions and within the tread recess. In other words, the spikes of Pettersson, whether circular or not, are maintained in a single orientation throughout the installation process. Therefore, Pettersson does not teach or suggest the jaw fingers and orientation of the studs into a predetermined stud orientation by the jaw fingers as recited in claims 1 and 16.

2. Ostrovskis

Ostrovskis does not teach or suggest jaw fingers that define a stud receiving area in which the studs can be oriented in any of a plurality of stud orientations and a stud orienting area in which the studs are oriented into a predetermined stud orientation.

Ostrovskis discloses an injection pipe 30 "suitable as a device for installing spikes," "seating spikes" and "mounting spikes." Page 4, paragraphs 45, 46 and 66. More specifically, the studs or spikes of Ostrovskis are "shot, preferably while the running surface is still unvulcanized, into the [blank] running surface" of the tire using the injection pipe 30 "in which the spikes are accelerated prior to impact on the periphery of the running surface." Page 1, paragraph 8. In other words, rather than forming recesses in the hard vulcanized tread of a tire and inserting the studs within such recesses, Ostrovskis teaches that studs can be "shot" directly into the soft unvulcanized tread of a tire using an injection pipe. Accordingly, as jaw fingers are used exclusively, as taught by Pettersson, and partially, as recited in claims 1 and 16, to expand

recesses in a vulcanized tread, jaw fingers are not suggested or necessary for, and in fact would be discouraged from use in, installing studs in an unvulcanized tread as disclosed in Ostrovskis.

Additionally, Ostrovskis does not teach or suggest an installation tool that positions studs in any of a plurality of stud orientations and reorients the studs into a predetermined stud orientation. The injection pipe of Ostrovskis is similar to the guide bore of Pettersson in that it has "such a clear cross section that this cross section surrounds the top view of each of the spikes to be mounted with slight play, in order to guide the spike securely free of torsion and seat it in the proper angular position." *Id.* In other words, like the guide bore of Pettersson, the injection pipe 30 of Ostrovskis has the same cross-sectional shape and size as the studs.

Ostrovskis emphasizes the importance of matching the cross-sectional shape and size of the injection pipe with the spikes for properly orienting the spikes by stating that "it is important that the clear cross section of the pipe agree as precisely as possible with the outline of the type of spike to be mounted ... in order to avoid jamming." *Id.* at paragraph 46. In other words, the installation tool of Ostrovskis, i.e., the injection pipe 30, retains the studs in a single orientation, i.e., prevents reorientation of the studs, as they pass through the tool such that the studs will be installed in the tread in the same orientation as they were within the tool. Accordingly, Ostrovskis does not teach or suggest an installation tool that positions studs in any of a plurality of stud orientations and reorients the studs into a predetermined stud orientation.

3. Russia

Russia also does not teach or even suggest jaw fingers that define a stud receiving area in which the studs can be oriented in any of a plurality of stud orientations and a stud orienting area in which the studs are oriented into a predetermined stud orientation.

Similar to Pettersson, Russia discloses a stud installation device having a guide tube 11 for feeding and orienting the studs and lips 14 exclusively for widening a hole in the tire tread prior to installing a stud in the hole. Abstract; Figures 15 and 16. Also, like the injection pipe of Ostrovskis, the guide tube 11 has the same cross-sectional shape and size as the studs in order to keep the studs in a single orientation as they move along the guide tube 11 (see Figures 17-19). For example, Russia states that the guide tube 11 provides for the "orientation of antiskid stud in circumferential position for its delivering and fitting in tyre tread." Abstract. Once the studs reach the end of the guide tube 11, pushers 16 contact the body 1 of the studs, maintain the studs

in the same orientation as within the guide tube 11, and drive the studs into the widened hole in the tread in the same orientation. Abstract; Figures 15, 16 and 19. In other words, the lips 14 do not reorient the studs since the studs are already oriented in a proper installation orientation prior to passing between the lips. Accordingly, Russia does not teach or suggest an installation tool that provides studs oriented in any of a plurality of stud orientations and reorients the studs by contact with jaw fingers or any other component.

4. Conclusion

Based on the foregoing, even if one were motivated to modify the circular studs of Pettersson to non-circular studs and the circular bore of Pettersson to a non-circular bore having the same cross-sectional shape as the studs to properly orient the studs in the tread of a tire as taught by Ostrovskis and Russia, which one would not be, the non-circular studs of the modified apparatus of Pettersson would be maintained in a single orientation as they are fed through the bore 11, exit the bore, and enter the widened recess in the tire between the finger end portions 17a, 18a, 19a. Accordingly, the combination of Pettersson, Ostrovskis and Russia do not teach or suggest jaw fingers that define a stud receiving area in which the studs can be oriented in any of a plurality of stud orientations and a stud orienting area in which the studs are oriented from one of the plurality of stud orientations into a predetermined stud orientation.

For at least the foregoing reasons, the combination of Pettersson, Ostrovskis and Russia does not render obvious the combination of features recited in claims 1 and 16. Therefore, withdrawal of the rejection of claims 1 and 16 is respectfully requested.

Claims 2-6, 8-15, 17-22, 30-37, 40 and 41, being dependent, either directly or indirectly, upon one of base claims 1 or 16, are allowable for at least the same reasons as for the base claims, as well as for the respective additional features recited therein. Accordingly, withdrawal of the rejection as to claims 2-6, 8-15, 17-22, 30-37, 40 and 41 is respectfully requested.

Claims 38 and 39

Claims 38 and 39 are directed to a method for installing non-round anti-slip studs in a vehicle tire tread. As amended, the method comprises positioning an anti-slip stud comprising a top bowl and a bottom flange within a stud receiving area between at least three jaw fingers "in any one of a plurality of stud orientations." Claims 38 and 39 are further amended to recite

"pressing said anti-slip stud with said plunger pin against the tip portions of the jaw fingers and at least partially into the stud orienting area to (i) reorient the anti-slip stud from the one of the plurality of stud orientations into a predetermined stud orientation with respect to the rotation axis line, and (ii) expand the stud recess."

For at least the reasons discussed above in relation to claims 1 and 16, the combination of Pettersson, Ostrovskis and Russia fails to render obvious the combination of features recited in claims 38 and 39. For example, neither Pettersson, Ostrovskis, nor Russia, whether considered alone or in combination, teach or suggest positioning studs between stud receiving areas between at least three jaw fingers in any one of a plurality of stud orientations and reorienting the studs by pressing the studs against tip portions of the at least three jaw fingers.

Based on the foregoing, withdrawal of the rejection of claims 38 and 39 is respectfully requested.

Rejection of Claims 7, 8, 29 and 30 Under 35 U.S.C. § 103(a)

The Office action rejects claims 7, 8, 29 and 30 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pettersson in view of at least one of Ostrovskis and Russia, and further in view of U.S Patent No. 6,374,886 ("Eromaki"). Applicant respectfully traverses this rejection.

As discussed above, the applied combination of Pettersson, Ostrovskis and Russia fail to render obvious independent claims 1 and 16.

Applicant submits that Eromaki does not provide for the deficiencies of Pettersson, Ostrovskis and Russia. Accordingly, the applied combination of Pettersson, Eromaki, and at least one of Ostrovskis and Russia would not have rendered obvious the features recited in claims 1 and 16.

Claims 7 and 8, being directly dependent upon base claim 1, and claims 29 and 30, being directly dependent upon base claim 16, are allowable for at least the same reasons as for the respective base claims, as well as for the respective additional features recited therein. Therefore, withdrawal of the rejection as to claims 7, 8, 29 and 30 is respectfully requested.

Rejection of Claims 23-28 Under 35 U.S.C. § 103(a)

The Office action rejects claims 23-28 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pettersson in view of at least one of Ostrovskis and Russia, and further in view

of Finland Patent No. 9/65 ("Finland") or Japanese Patent No. 56-146407 ("Japan"). Applicant respectfully traverses this rejection.

As discussed above, the applied combination of Pettersson, Ostrovskis and Russia fail to render obvious independent claim 16.

Applicant submits that neither Finland nor Japan provide for the deficiencies of Pettersson, Ostrovskis and Russia. Accordingly, the applied combinations of (1) Pettersson, Finland, and at least one of Ostrovskis and Russia, and (2) Pettersson, Japan, and at least one of Ostrovskis and Russia would not have rendered obvious the features recited in claim 16.

Claims 23-28, being indirectly dependent upon base claim 16, are allowable for at least the same reasons as for the base claim, as well as for the respective additional features recited therein. Therefore, withdrawal of the rejection as to claims 23-28 is respectfully requested.

Conclusion

Based on the foregoing, Applicant respectfully submits that the claims are drawn to allowable subject matter and that the application is in condition for allowance. Should the Examiner believe that anything further is necessary to place this application in better condition for allowance, the Examiner is requested to contact Applicant's representative by telephone.

Respectfully submitted,

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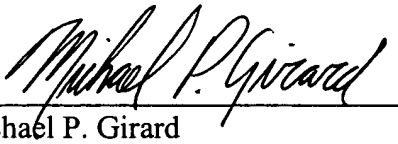
By 

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